

ABSTRACT OF THE DISCLOSURE

In accordance with one embodiment of the present invention, a NO_x removal system is provided for removing nitrogen oxides from a nitrogen oxide containing exhaust. The NO_x removal system comprises a NO_x treatment section, a diverter, and a hydrogen generation section. The NO_x treatment section is configured to remove nitrogen oxides from the exhaust. The diverter is configured to extract water from the exhaust and deliver extracted water to the hydrogen generation section. The hydrogen generation section is configured to deliver hydrogen to the NO_x treatment section. The NO_x removal system is configured such that the delivery of the hydrogen to the NO_x treatment section is substantially isolated from delivery of the exhaust to the NO_x treatment section. In accordance with 37 CFR 1.72(b), the purpose of this abstract is to enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The abstract will not be used for interpreting the scope of the claims.